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Bureau of Air Management
Connecticut Department of Energy and Environmental Protection
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Boston, Massachusetts
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Proposed Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces, and New Residential Masonry Heaters

Good afternoon. My name is Richard Pirolli, and I am the Director of the Planning & Standards Division in the Bureau of Air Management at the Connecticut Department of Energy and Environmental Protection. I am glad to have the opportunity today to highlight a problem facing Connecticut's citizens, namely particulate matter and air toxic emissions from wood stoves and hydronic heaters. Because this is an ongoing environmental and public health concern in Connecticut, we are pleased that EPA has proposed requirements for manufacturers that will make residential wood heaters, including hydronic heaters, significantly cleaner.

In recent years in Connecticut, we have had many complaints about wood smoke, mainly from neighbors of people operating hydronic heaters. The Bureau of Air Management has received hundreds of wood smoke complaints in each of several recent years. While people are annoyed by the odor and the visible emissions often released from old, improperly operated or improperly sited devices, the complainants are most concerned about the adverse health impacts from breathing the emissions generated by these devices. This has resulted in numerous towns in Connecticut banning these units and several local health districts issuing cease and desist orders for violating units.

The severity of potential health effects and magnitude of the population affected by wood smoke pollutants have led health scientists to conclude that exposure to wood smoke should be dramatically minimal. Wood smoke is comprised of numerous constituents including fine particulate matter, carbon monoxide, volatile organic compounds and polycyclic organic matter. The statistics are informative. In the U.S., residential wood combustion is estimated to result in emissions of 600,000 tons of fine particulate matter per year, 44% of all stationary and mobile source polycyclic organic matter and is responsible for 25% of all area source air toxics cancer risks.

The health impacts related to wood smoke are primarily related to breathing the fine particulate matter. These fine particles are associated with serious cardiopulmonary health outcomes and their impact is particularly problematic for a large number of susceptible population subgroups, including young children, asthmatics, persons with respiratory or heart disease, diabetics and the elderly.

Connecticut continues to experience winter-time exceedances of the PM_{2.5} national ambient air quality standard 24-hour value of 35µg/m³ and did so on days in both December 2013 and January 2014. Furthermore, an ambient air monitoring study conducted in Connecticut from September 2006 through April 2008, determined that wood smoke particulate matter contributed significantly to total PM_{2.5} during the colder, winter months, particularly when the meteorological conditions were conducive to atmospheric stability and wintertime inversions. The monitored maximum monthly average of wood smoke particulate matter contributions to PM_{2.5} levels was 41.3% with maximum daily and hourly contributions approaching 74.3% and 100%, respectively.

While woodstoves that are EPA-certified are now available, the majority of those in operation are older units with no pollution control devices. Hydronic heaters are currently not required to comply with EPA regulations, and, although many new hydronic heaters comply with EPA's voluntary standards, many of those in use are older, dirtier units. As fuel prices have risen, so have the sales of wood stoves and hydronic heaters. The people buying wood burning devices perceive wood as a natural resource and assume they have made a cheaper, cleaner, more reliable energy choice. Unfortunately much still needs to be done to ensure that wood burning is actually clean. Thus, we strongly support EPA setting standards that will lead to the installation of new, cleaner wood burning appliances. We also note that the health benefits associated with adoption of the proposed regulations are valued at a much higher level than the costs to manufacture lower-emitting appliances.

We urge expeditious adoption of this proposal as one tool to address this problem. While Connecticut does have some concerns about the speed with which manufacturers will be required to comply with the new standards, we applaud EPA for taking this important step and will raise any concerns or technical comments we have in our written comments. While this proposal will not remove the issues we face in enforcing state and federal requirements for wood burning devices and will not make immediate changes, the proposal represents a crucial tool to use in building a cleaner air future for Connecticut's citizens. Thank you.